## Nº 11. **Michael Balls,** Genève. Spontaneous neoplasms in amphibians. Summary.

Station de Zoologie Expérimentale, Université de Genève.

During one year thirty individuals from a colony of one thousand frogs of the genus *Xenopus* died of identifiable disease, including six with spontaneous tumours. Four cases of lymphosarcoma were discussed.

*1.* Female *Xenopus laevis.* Widespread destruction of the kidney, lung and liver was observed and two nodules of lymphosarcoma cells were found attached to mesentery near the stomach.

*2.* Female *Xenopus fraseri.* An ovarian tumour measuring 0,5 cm in diameter was composed of a dense mass of lymphoid cells with areas of necrosis. The liver, lung and fat-body were being invaded.

*3.* *Xenopus fraseri.* The alimentary canal had been almost completely replaced by tumour cells and invasion of the liver, lungs, fat-bodies and kidneys was advanced. Near the kidneys were four, white, vascularised bodies — two ovo-testes and two immense tumour nodules. Also present were two oviducts.

*4.* Female *Xenopus laevis laevis.* A rapidly growing lump behind the right eye was found to consist of spheroidal, lymphoid cells of uniform size, which had destroyed much of the temporalis and depressor mandibularis muscles.

No previously described amphibian tumour had so widely affected the animal as in cases 2 and 3, the first known in *Xenopus fraseri* (Boulenger). It was considered that the lack of known amphibian tumours and the apparent prevalence of skin tumours was due to a lack of observers rather than to biological factors. It was suggested that workers using amphibia should send specimens to those interested in amphibian pathology, should they themselves lack the opportunity to carry out the necessary post-mortem examinations.

## ADDITIONAL NOTE

### *Case Number 4.*

Arteries in the tumour of the head contained many neoplastic lymphoid cells, although the artery walls were intact. On examining the viscera microscopically, extensive replacement of normal tissue was found in the liver, kidney, lung, spleen and ovary. Lymphocytes and erythrocytes in the blood vessels of these organs were in the ratio 1,2: 1, whereas in the normal animal the ratio of all leucocytes to erythrocytes is 1 : 300 (Schlumberger, 1958, in *Pathologie der Laboratoriumstiere*, Part II, ed. Cohrs, Jaffe and Meesen, Berlin-Göttingen-Heidelberg).

Full details of this, the first known case of lymphosarcoma with lymphocytic leukaemia in an amphibian, will be published shortly.

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## N° 12. **A. W. Blackler,** Genève. Transfer of Primordial Germ-Cells between two Subspecies of Xenopus Laevis. Summary.

Station de Zoologie expérimentale, Université de Genève.

Following the establishment by Blackler and Fischberg (1961) of a technique for transplanting the primordial germ-cells of *Xenopus* at the neurula stage, grafts of these cells have been made between the subspecies *Xenopus laevis laevis* and *Xenopus laevis victorianus.*

These subspecies differ in details of their eggs and development, and a nuclear marker has been employed as a means of estimating the percentage success of germ-cell transfers.

Twelve experimental male animals showed graft success varying between 0 and 100%. The six experimental female animals showed graft success of 0-100%. The eggs laid by these females which were of graft origin had the same dimensions, colour and development as those of the donor subspecies.